Kalyan C. Mutyala

Postdoctoral Researcher

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Education

- **Ph.D.,** Mechanical Engineering – Tribology, The University of Akron, Akron, OH
- **M.B.A.,** Operations Management, Indira Gandhi National Open University, India
- **B.Tech** in Mechanical Engineering, Jawaharlal Nehru Technological University, India

Research Interests

- Materials Tribology, 2D materials (Graphene, MoS_2 and TMDs)
- Thin films/coatings for Energy and Electronic applications
- Design and development of new test equipment and methodologies

Academic Honors & Awards

- Al Sonntag Award, STLE (2017).
- Gold award, poster session, STLE (2014).
- Outstanding undergraduate student award (Gold medal), JNTU (2005).

Professional Experience

- Argonne National Laboratory – Center for Nanoscale Materials (CNM) 2017 – Present
  Postdoctoral Researcher
- George Washington University – Energy Research Group 2016 – 2017
  Postdoctoral Scientist
- University of Akron – Timken Engineered Surfaces Laboratories 2012 – 2016
  Research Assistant
- Cunningham Lindsey IISLA Pvt. Ltd, Hyderabad, India 2008 – 2011
  Deputy Manager
- Intech Insurance SLA Pvt. Ltd, Hyderabad, India 2005 – 2008
  Surveyor/Engineer

Publications

1. ***Mutyala K.C.*** *et al.*, "Comparison of the Tribological Performance and Corrosion Resistance Characteristics of Cr_xN Thin Film Coatings", submitted/under review.

2. H. Singh, **K.C. Mutyala**, R.D. Evans, and G.L. Doll, "An Atom Probe Tomography Investigation of Ti-MoS_2 and MoS_2-Sb_2O_3-Au Films", Journal of Materials Research, Just Accepted, 2017.

3. ***Mutyala K.C.*** *et al*., "Effect of deposition method on the RCF Performance of Cr_xN Thin Film Ball Coatings", Surface and Coatings Technology, 305, 176-183, 2016.

4. ***Mutyala K.C.*** *et al*., "Influence of MoS_2 on the rolling contact performance of bearing steels in boundary lubrication: A different approach", Tribology Letters, 61(2), 2016.

5. ***Mutyala K.C.*** et al., "Effect of diamond-like carbon coatings on ball bearing performance in normal, oil-starved and debris-damaged conditions'', Tribology Transactions, 59:6, 1039-1047, 2016

6. ***Mutyala K.C.*** et al., "Deposition, Characterization, and Performance of Tribological Coatings on Spherical Rolling Elements'', Surface and Coatings Technology, 284, 302-309, 2015.

7. H. Singh, **K.C. Mutyala**, R.D. Evans, and G.L. Doll, "An investigation of material and tribological properties of MoS_2-Sb_2O_3-Au solid lubricant films under sliding and rolling contact in different environments'', Surface and Coatings Technology, 284, 281-289, 2015.

8. H. Singh, **K.C. Mutyala**, H. Mohseni, T.W. Scharf, R.D. Evans and G.L. Doll, "Tribological Performance and Coating Characteristics of Sputter Deposited Ti Doped MoS_2 in Rolling and Sliding Contact'', Tribology Transactions, 58:5, 767-777, 2015. (Won 2017 STLE Award)

9. H. Singh, **K.C. Mutyala**, H. Mohseni, T. W. Scharf, R. D. Evans, and G. L. Doll, "Tribological Behavior of Ti Containing MoS_2 in Sliding and Rolling Contact'', Tribology & Lubrication Technology, January, pp. 22-24, 2015 (poster prize article).

Conference Presentations (3 out of 13)

1. ***Mutyala K.C.*** *et al.*, "Effect of deposition method on the tribological and functional performance of Cr_xN ball coatings", Oral session at: STLE 71st Annual Meeting & Exhibition, May 15-19, 2016, Las Vegas, NV, USA.

2. ***Mutyala K.C.*** *et al.*, "Comparison of the Tribological Performance and Corrosion Resistance Characteristics of Cr_xN Thin Film Coatings", Oral session at: Material Science & Technology, Oct 4-8, 2015, Columbus, OH, USA.

3. **Mutyala K.C.** et al., "Deposition, Characterization, and Performance of Tribological Coatings on Spherical Rolling Elements'', Oral session at: ICMCTF 42nd Annual Meeting & Exhibition, Apr 20-24, 2015, San Diego, CA, USA.